

Taka-Aki Sato
Serial No.: 10/092,138
Filed: March 6, 2002
Page 2

Listing of Claims

The following listing of claims will replace all prior versions, and listings, of claims in the subject application:

Claim 1 (canceled).

10 ~~2~~ ⁹
2. (currently amended) The method of claim ~~1~~ ⁹, wherein the amino acid sequence (S/T)-X-(V/I/L) is fused to the C-terminal of the second protein.

Claim 3 (canceled).

11 ~~3~~ ⁹
3. (currently amended) The method of claim ~~1~~ ⁹, wherein the first protein deposited in step (a) is in a soluble buffer.

12 ~~4~~ ⁹
4. (currently amended) The method of claim ~~1~~ ⁹, wherein the first protein deposited in step (a) is immobilized in a gel.

13 ~~5~~ ⁹
5. (currently amended) The method of claim ~~1~~ ⁹, wherein the substrate includes a plurality of microwells contained therein, and the first protein is deposited in step (a) into the microwells.

14 ~~6~~ ⁹
6. (currently amended) The method of claim ~~1~~ ⁹, wherein the substrate includes a glass plate, and the first protein array is printed onto the glass plate in step (a).

15 ~~7~~ ⁹
7. (currently amended) The method of claim ~~1~~ ⁹, wherein the substrate includes a glass plate and a plurality of gel pads on the glass plate, and the first protein is deposited in step (a) onto the gel pads.

Taka-Aki Sato
Serial No.: 10/092,138
Filed: March 6, 2002
Page 3

16 ~~16~~ (currently amended) The method of claim ~~4~~ ⁹ ~~25~~, wherein the first protein is deposited on the substrate by a robot.

Claims 10-13 (canceled).

17 ~~17~~ (currently amended) A method of preparing a protein array, comprising the steps of:

(a) depositing on a substrate an array of first proteins, each first protein comprising a PDZ domain; and

(b) applying a second protein, which comprises an amino acid sequence (S/T)-X-(V/I/L)-COOH, to the array of first proteins, the amino acid sequence (S/T)-X-(V/I/L)-COOH of the second protein, for each of the first proteins, binding to the PDZ domain of the first protein,

cl wherein each hyphen represents a peptide bond, each parenthesis encloses amino acids which are alternatives to one other, each slash within such parentheses separates the alternative amino acids, and the X represents any amino acid which is selected from the group ~~comprising the twenty naturally occurring amino acids~~ consisting of alanine, cysteine, aspartic acid, glutamic acid, phenylalanine, glycine, histidine, isoleucine, lysine, leucine, methionine, asparagine, proline, glutamine, arginine, serine, threonine, valine, tryptophan and tyrosine.

18 ~~18~~ (currently amended) A method of preparing a protein array, comprising the steps of:

(a) depositing on a substrate an array of a first protein, the first protein comprising a PDZ domain; and

(b) applying a plurality of second proteins, each of which comprises ~~a corresponding~~ an amino acid sequence (S/T)-X-(V/I/L)-COOH, to ~~corresponding~~ the elements of the first protein array, for each of the second proteins, the amino acid sequence (S/T)-X-

Taka-Aki Sato
Serial No.: 10/092,138
Filed: March 6, 2002
Page 4

(V/I/L)-COOH of the second protein binding to the PDZ domain of the first protein in the ~~corresponding~~ array element,

wherein each hyphen represents a peptide bond, each parenthesis encloses amino acids which are alternatives to one other, each slash within such parentheses separates the alternative amino acids, and the X represents any amino acid which is selected from the group ~~comprising the twenty naturally occurring amino acids~~ consisting of alanine, cysteine, aspartic acid, glutamic acid, phenylalanine, glycine, histidine, isoleucine, lysine, leucine, methionine, asparagine, proline, glutamine, arginine, serine, threonine, valine, tryptophan and tyrosine.

Claims 16-20 (canceled).

21. (new) The method of claim 14, wherein the amino acid sequence (S/T)-X-(V/I/L) is fused to the C-terminal of the second protein.

22. (new) The method of claim 14, wherein at least one of the first proteins deposited in step (a) is in a soluble buffer.

23. (new) The method of claim 14, wherein at least one of the first proteins deposited in step (a) is immobilized in a gel.

24. (new) The method of claim 14, wherein the substrate includes a plurality of microwells contained therein, and the first proteins are deposited in step (a) into the microwells.

25. (new) The method of claim 14, wherein the substrate includes a glass plate, and the first proteins are printed onto the glass plate in step (a).

Taka-Aki Sato
Serial No.: 10/092,138
Filed: March 6, 2002
Page 5

²⁷
~~26~~. (new) The method of claim ~~14~~, wherein the substrate includes a glass plate and a plurality of gel pads on the glass plate, and the first proteins are deposited in step (a) onto the gel pads.

⁸
~~27~~. (new) The method of claim ~~14~~, wherein the first proteins are deposited on the substrate by a robot.
